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HYDROA ÆSTIVALE.

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HYDROA ÆSTIVALE.*

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THE following two cases of this somewhat rare affection are contributed simply with the object of adding to the small number already published.

Case I.—A. B., child, aged six, came under my observation in the early part of the summer of 1880, fifteen years ago, when the following notes were taken :

The patient, a native of Quebec, had always lived in Canada, and for the last four years and a half had resided in Chatham, in the western part of Ontario, a district in which at that time malaria prevailed.

There is nothing of note in the family history more than that the children do not seem to have been robust. Four out of seven died in early life from various diseases. The mother had one miscarriage three years before the birth of this child. There is no history of syphilis. Two years ago, in April, 1878, some small red spots appeared on the face, and a few on the hands. About a week after their appearance the patient was attacked by diphtheria, and while confined to the house the spots faded away without leaving any scars. Similar spots appeared in June, after she commenced to go outside. They grew larger, became vesicular and then pustular, attaining their full size in two or three days, when a dark spot appeared in the center of each, after which a scab formed over the whole surface. These dried up and fell off in a few days. The whole duration of each crop of vesicles was about nine or ten days. During the summer successive crops of this eruption appeared, which in many instances left permanent cicatrices.

In every instance the attack followed exposure either to the direct or reflected rays of the sun. In the autumn of 1878 the eruption disappeared altogether; but in the latter part of the winter of 1878-'79, after driving on a bright day, when the snow was on the ground, her

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face was again affected. In the spring of 1879 spots appeared first on the face, on the part not protected by her winter hood. When she ceased wearing the hood more of the face became affected. While wearing gloves the hands were not affected, but became so when she left them off. The wrists, which were covered for a time after she ceased wearing gloves, were attacked when she left off her cloak, which by its long sleeves had afforded protection. She experienced a slight burning sensation when the rash appeared, but it was not itchy at any time. She had scarlatina in the winter of 1879-'80. This had no special effect on the eruption, except that it faded away during confinement to the house, as it always does when she is not exposed to the sun's rays. She has constantly worn a glove on her left hand since May 1st, or four weeks, and no fresh spots have appeared on the hand during that time. The eruption is less marked in the winter, partly because she is kept more in the house, and partly, her mother thinks, because the rays of the sun in winter do not seem to have quite the same effect as in summer. It always appears if she goes out, if the sun is shining, and sometimes after sitting at an open window if a warm wind is blowing, although the sun's rays do not shine directly on her. No effect is produced on a dark, cloudy day.

Patient had an attack of ague some weeks ago, and has now some symptoms of that disease. Her appetite is fairly good. She is fond of acids, especially vinegar.

Present Condition.—A copious eruption is present on the face, ears, and right hand. On the face it consists for the most part of lesions, ordinarily about the size of a ten-cent piece, a few even larger. Some are umbilicated, and resemble smallpox pustules; others are covered with scabs, while very superficial cicatrices are found in situations where scabs had previously existed. The nose is swollen, and presents the same appearance as the face. The lips are much swollen, and covered with large pustules, which are elongated, extending along the margin. There is more or less general swelling of the face. The patient was vaccinated when eight years old, and the vesicles were a long time healing.

Nearly every form of application seemed to aggravate the disease. During the past winter, even when she remained constantly in the house, small spots appeared occasionally. These, however, did not become vesicular, and soon faded away.

In August of 1879 she was taken to Snowden, in the woods, where she lived in a log house. Her general health was better, but the eruption remained unchanged. The patient was seen several times in the summer of 1880, and various applications were used without any good

results. She then passed from my observation, and nothing more was heard of her until this summer. I learned from her friends that her condition remained the same until the thirteenth year, when menstruation commenced. From that time until the eighteenth year the eruption gradually disappeared, and at the latter age it ceased entirely. During that time a thin gauze veil seemed quite sufficient to protect the face from the rays of the sun. Since the eighteenth year her health has been remarkably good in every way.

Case II.—C. D., female, aged twenty-five, a blonde. Notes taken in August, 1895. When ten years of age the patient had a chronic swelling of the left knee joint, probably of tubercular character. The limb was on this account amputated. Although not strong, her health has been good since the operation. The parents remember that previous to the amputation an eruption appeared on the face and hands. The patient, however, dates the commencement of her trouble at a period fourteen years ago, when she was eleven years of age, and it has steadily continued since that time until this summer. For the last two months it has been much better, and at the present time her face is quite free from eruption. The phenomena during the fourteen years have changed very little, and were described as follows: When she was exposed to the sun's rays for about twenty minutes or half an hour she noticed a burning sensation on the unprotected parts of the body. This would soon be followed by extreme swelling and the formation of small water blisters. These in two or three days would become yellow, and scales would form on the surface. These were not thick, and would speedily dry up and fall off, leaving a congested surface which would soon return to the normal condition. The pustules, so far as I could learn, were never umbilicated. The crops of pustules varied in duration according to the severity of the attack. The process in some attacks did not last longer than eight or ten days, whereas at other times it lasted two or three weeks. The swelling was greater on some occasions than others, sometimes almost closing the eyes and producing a good deal of deformity of the features. The attacks were accompanied by general *malaise*, coryza, sleeplessness, and anorexia.

The eruption will occur on any part of the body exposed to the sun. On one occasion she had a very light covering on the legs and thighs, and an eruption appeared on these parts after a short exposure. It occurs in the winter just as in the summer if the sun is shining. If she sits near a window the eruption will appear even if the sun is not shining directly on her. She is of the opinion that a very cold wind in winter would have the same effect, but she is not certain, and she could not give any instance in which the eruption had come out

after such exposure. A sufficiently thick veil always prevents the action of the sun. She is afraid to go out even on a cloudy day, and has been kept almost a prisoner in the house for the last fourteen years, at least during the summer, only going out in the evening after the sun had gone down.

Dr. Phillips, who has had charge of the case for the last three or four months, kindly gave me the following description of the eruption from notes he took at the time :

When he first saw the patient, in April last, the hands presented a thick, hard, dry, and fissured skin, with a few vesicles. The face and ears were covered by thick scabs beneath which existed a sero-purulent discharge. The presence of vesicles and some infiltration gave the parts the appearance of a chronic eczema. The thickened skin was removed by resorcin ointment and by Unna's plaster of salicylic acid and creosote. In two weeks the parts had resumed their normal condition. Dr. Phillips, who had recently spent some time in London and had seen Hutchinson's case, at once made the diagnosis of hydroa of Bazin.

In the month of May a relapse occurred. When seen by the doctor the day after exposure, the backs of the hands, fingers, and wrists, and one side of the face, presented an erythematous, swollen appearance. The surface of the wrist was closely packed with vesicles about the size of a grain of wheat, filled with a sero-purulent fluid. A week later the vesicles had disappeared, leaving scabs and crusts situated on a thickened and reddened integument. The skin afterward was fissured and scaly. Under the same treatment as before described all evidence of the eruption passed away. As previously stated, when I saw her in August the skin was quite normal, except that there seemed to be an absence of pigment over small patches, and the eyebrows have to a great extent disappeared.

It is quite evident from the description of these cases, as well as from those given by Unna, that the eruption is not always of a vacciniiform character, and that therefore the term hydroa vacciniiforme does not apply to all cases. In the first one, just described, the vacciniiform appearance was quite striking; whereas in the second, a case in all respects similar, the eruption was of a vesicular and bullous character. The term hydroa puerorum, adopted by Unna, is also inappropriate, as my first, a case of typical hydroa vacciniiforme, occurred in a girl. In the great majority the patients have been boys, but some cases of females have been recorded. Berliner describes a case in a female, twenty-three years of age, who had suffered from the disease for nineteen years. The case described by Veiel under the heading of eczema solare, a female

fifty-six years of age, and the one given by Unna, were, so far at least as the ætiology is concerned, identical with those described by me. Boeck gives the case of a female, twenty-seven years of age, in whom the eruption had existed two years. Von Dort's and Burri's cases were also females. It would appear that, as a rule, the condition is found in females later in life than in males. It is also more eczematous in nature and less likely to leave scars. The persistent character which the affection sometimes possesses is illustrated by the second case, as also by those recorded by Veiel and Unna. I have adopted the term *hydroa æstivale*. The direct rays of the sun are not the only cause, as it may arise from the heated atmosphere of a room when the sun is shining. My second patient, knew by experience exactly how near she could sit to an open window with safety, and then there was much greater danger when the window was open than when it was closed. There was no evidence in either case that cold winds in winter would produce the eruption, although the patient was under the impression that they might. The heat from a stove had no effect in either case.

Berliner includes the cases which we are now discussing, with those of the summer prurigo of Hutchinson, under the head *eruptio æstivale*, and makes two divisions: *eruptio æstivalis pruriginosa* and *eruptio æstivalis bullosa*. The two classes of cases seem to me to be too unlike to be placed under the one head.

The majority of writers upon the subject attribute the cause of the eruption to the action of the chemical rays upon the skin. Widmark concludes from his experiments that the ultra-violet rays act with great intensity on the surface of the body.

The difference between the effect produced by the sun's rays in the summer and in the winter in these cases would lead me to believe that their action is not altogether due to the ultra-violet rays, and that the heat rays play also an important part. In my second case the electric light had no effect, although in it the chemical rays predominate. The exclusion of the ultra-violet rays has been accomplished in two or three ways by Unna—by the application of tannate of silica, by a watery solution of bisulphide of quinine and glycerin, and by curcuma—but the results do not seem to have been very satisfactory. The question arises, How do the rays of the sun produce such deep lesions in so short a time? The process can not easily be explained by direct action on the tissues without the aid of the vaso-motor nerves. The inflammation, then, is probably of a reflex character. Whether any toxin exists in the tissues or not has not been proved.

After reading the description of the recorded cases one arrives at

the conclusion that in a very few individuals the sun's rays produce a dermatitis varying in intensity, and accompanied by an eruption which may be vesicular, bullous, or vacciniform. The amount of necrosis and subsequent cicatrization will depend on the vulnerability of the tissues and the amount of exposure.

The second patient, E. F., was very careful not to leave the house when the sun was shining, and this no doubt partly accounted for the absence of cicatrization. The tendency to this form of inflammation does not seem to be hereditary. I have not met with a single instance of its having occurred in more than one member of a family, differing in this respect from xeroderma pigmentosum.

The indications for treatment are twofold: (1) To restore to the tissues that power of resistance which exists in ordinary conditions; (2) so to protect the skin that those rays which would act injuriously are absorbed. In my first case I tried various alteratives without benefit, and internal medication seems to have had very little effect, so far as one can judge from the experience of others.

The protective agents which I have used seemed to irritate the skin, and had not the desired effect of preventing an eruption. A covering which would exclude the light altogether, or almost altogether, was always effectual.

